

PTO/SB/21 (09-04)

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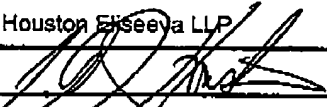
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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/007,502	
	Filing Date	November 8, 2001	
	First Named Inventor	Jonathan R. Coppeta	
	Art Unit	1765	
	Examiner Name	Ahmed, Shamim	
Total Number of Pages in This Submission	3	Attorney Docket Number	1099us

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In Re:	Jonathan R. Coppeta	Confirmation No:	2283
Application No:	10/007,502	Group:	1765
Filed:	November 8, 2001	Examiner:	Ahmed, Shamim
For:	Method for Fabricating Micro Optical Elements Using CMP		
Customer No.:	25263		
Attorney Docket No.	1099us		

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Sir:

This is the Applicants'-Appellants' Reply to the Examiner's Answer of January 9, 2006.

The following summarizes issues that were presented in the Appellant's Brief and unanswered in the Examiner's Answer.

Relative to Claim 1

It is Applicant's contention that the references do not suggest 'mechanically polishing a surface to modify features to produce optically curved surfaces'.

Kane shows the use of chemical polishing to product curved surfaces.

The Answer at page 4, first full paragraph, points to the following portion of Hawkins for the proposition that the references suggest the claimed invention:

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20 tive index higher than that of the dielectric layer 100. The
lens material 130 is preferably chosen from the group silicon
nitride, titanium oxide, and tantalum oxide, and can be
deposited by vacuum evaporation or by application and
densification of sol-gels. The top of the coating of the lens
material 130 is irregularly formed at this stage, as depicted
in FIG. 5D. Referring now to FIG. 5E, the lens material 130
25 is then planarized optically flat to form optically flat lens
surfaces 130a, preferably by chemical mechanical polishing,
to the extent that the lens material 130 is removed from the
optically flat surface 100a of the dielectric layer 100 in
regions where there were no depressions 120a. Because the
30 depressions 120a of FIG. 5C are substantially contiguous,
the remaining portions of the original optically flat surface
100a can be removed, either by isotropic etching or by
chemical mechanical polishing to a slight extent, to form an
optically flat repolished surface 100b of the dielectric layer
35 100 in its place. The optically flat lens surfaces 130a of the


If anything, this portion of Hawkins supports Applicant's position, however.

Simply, it was known to use mechanical polishing to produce flat, planarized surfaces—
in fact, this is the classic application for CMP (chemical-mechanical-polishing) machines
used throughout the semiconductor industry. However, was not obvious from the
references to use mechanical polishing to produce optically curved surfaces, as claimed.

For this reason, Applicant-Appellant believes that the claims are patentable.

Should any questions arise, please contact the undersigned.

Respectfully submitted,

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Date: March 9, 2006